

★ PRIV/ S03 92-267295/32 ★ SU 1689768-A1  
 Colorimetric sensor - has three pn-junctions placed one over the other in semiconducting base and uses photo-currents formed in junctions to assess colour composition of light

PRIVEZENTSEV V V 88.12.30 88SU-4629839

(91.11.07) G01J 3/46

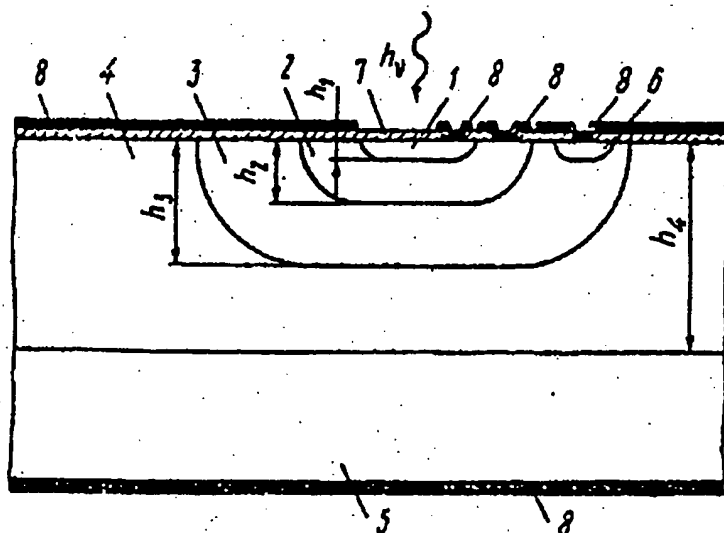
Three p-n-junctions (1-3) are moved in the reverse direction by applying the corresp. voltages and the area of the volumetric charge takes up the corresp. low-resistance area of the p-n-junctions. The analysed visible light is passed onto the sensor, altering the photo-currents of the three p-n-junctions depending on the spectral composition of the test visible light.

The colour composition of the analysis visible light is judged according to the ratio between the produced photo-currents. Low-resistance sections are formed of the same type of conductivity in high-resistance layers (3,4) forming the lower p-n-junction, to obtain ohmic contacts and to ensure mechanical strength of the plate. The surface of the sensor is coated with passivating layer (7) of silicon dioxide and metallisation (8) is carried out by a layer of aluminium.

USE/ADVANTAGE - Measurement of colour composition of visible light. Has simplified construction and manufacture. Bul. 41/7.11.91 (3pp Dwg.No.1/1)

N92-204385

S03-A02C



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